

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended): ~~Method~~ A method for nozzle-jetting oxygen into a synthesis reactor for oxy-dehydration for largely axial flow of the gas mixture through a catalyst bed, wherein the oxygen is fed to a ring distributor system having a plurality of concentric ring pipes provided with respective exit openings and arranged above the catalyst bed, the oxygen being fed in pure form, as air mixed with inert gas, or in water vapor, and is jetted on to the catalyst surface through ~~several~~ the exit openings in the ring distributor at an inclined angle from the vertical;

wherein the oxygen is jetted in a plane about 50-300 mm above the catalyst bed to ensure an oxygen dwelling time of ≤ 1 second in a space above the catalyst bed.

Claim 2 (Currently Amended): ~~Method~~ The method according to claim 1, wherein the jetting of the oxygen is taken up in a direction on to the reactor center and/or in direction on to the reactor wall and/or in a tangential alignment.

Claim 3 (Currently Amended): ~~Method~~ The method according to claim 1, wherein the jetting of the oxygen takes place in tangential alignment and for each concentric ring pipe of the ring distributor in alternating alignment from concentric ring pipe to concentric ring pipe of the ring distributor.

Claims 4-5 (Canceled).

Claim 6 (Currently Amended): ~~Device~~ The synthesis reactor according to claim 5 11, further comprising: with

(c) a central gas inlet pipe ~~that~~ centrally penetrates penetrating that the catalyst bed; and

(d) ~~with~~ a mixing dome above the catalyst bed; i

wherein ~~there is an oxygen~~ the ring distributor ~~surrounding~~ surrounds the centric gas ~~guiding~~ inlet pipe.

Claim 7 (Currently Amended): ~~Device~~ The synthesis reactor according to claim 5 11, wherein the ~~ring distributor is formed with several co-axially positioned ring pipes with gas exit openings that~~ ensure a gas flow in ~~the~~ a direction on to ~~the~~ a reactor center and/or reactor wall and/or in a tangential direction.

Claim 8 (Currently Amended): ~~Device~~ The synthesis reactor according to claim 5 11, wherein adjacent ~~gas~~ exit openings of the exit openings have ~~a~~ different flow outlet directions.

Claim 9 (Currently Amended): ~~Device~~ The synthesis reactor according to claim 5 11, wherein the ~~gas~~ exit openings are aligned in alternating sequence to adjacent exit openings of the exit openings of an adjacent ring pipe of the plurality of concentric ring pipes.

Claim 10 (Currently Amended): ~~Device~~ The synthesis reactor according to claim 5 11, wherein the ~~gas~~ exit openings are designed as holes or nozzles.

Claim 11 (New): A synthesis reactor for oxy-dehydration comprising:

(a) a catalyst bed; and

(b) a device, for nozzle-jetting oxygen onto the catalyst bed, comprising a ring distributor having a plurality of concentric ring pipes provided with respective exit openings above the catalyst bed;

wherein largely axial flow of gas mixture through the catalyst bed occurs;

wherein the exit openings are designed to jet the oxygen onto a catalyst surface of the catalyst bed at an angle inclined away from the vertical; and

wherein the ring distributor is positioned in a plane about 50-300 mm above the catalyst bed to ensure an oxygen dwelling time of ≤ 1 second in a space above the catalyst bed.